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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/018,814      | 04/22/2002  | Albert Felix         | 022701-977          | 2586             |

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BURNS DOANE SWECKER & MATHIS L L P  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

OH, TAYLOR V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1625

DATE MAILED: 06/04/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N .

10/018,814

Applicant(s)

FELIX ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **Final Rejection**

### **The Status of Claims**

Claims 1-10 have been rejected.

### **Claim Rejections - 35 USC § 112**

The rejection of claim 7 has been withdrawn due to the modification made in the amendment.

### **Claim Rejections - 35 USC 102**

The rejection of Claims 1-10 under 35 U.S.C. 102(b) as being anticipated clearly by Anderson et al (U.S. 5,471,001) has been changed to the rejection of Claims 1-10 under 35 U.S.C. 103 (a) as being unpatentable over Anderson et al (U.S. 5,471,001).

### **Claim Rejections - 35 USC 103**

1. Applicants' argument filed 3/24/2003 have been fully considered but are persuasive.

Rejection of Claims 1-10 under 35 U.S.C. 103 (a) as being unpatentable over Anderson et al (U.S. 5,471,001).

The rejection of Claims 1-10 under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (U.S. 5,471,001) is maintained for the reasons of the record in paper no. 10.

***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (U.S. 5,471,001).

Anderson et al disclose a process of producing adipic acid crystals in the following steps:

1. dissolving 160 g of adipic acid in 240 g of water by heating;
2. allowing to the solution to cool down and crystallize under mechanical stirring at 55° C.;
3. isolating the crystals from the solution (see col. 4, Example 3).

Furthermore, during the process, the hot mother liquid contains 20 to 50 % by weight adipic acid (see col. 3 ,lines 34-35). Also, after the completion of the crystallization, the particle size of the adipic acid has been analyzed and obtained in the range of from 300 to 330 microns (see col. 5 , table III, lines 12-20).

The instant invention , however, differs from the reference in that adipic crystals are dispersed in a liquid medium; in order to smooth the surface of the liquid crystals, the liquid medium has been stirred.

Concerning the dispersion of the adipic crystals in a liquid medium and the stirring used for smoothing the surface of the liquid crystals, the Anderson et al does indicate that there is a continuous re-circulation of slurry based on mother liquor containing dissolved adipic acid, nascent crystals of adipic acid, and crystals of adipic acid through the cylindrical baffle (see col .2 ,lines 46-49); furthermore, depending on

the intended ultrasonic use, a low or high intensity agitation can be applied to the crystals (see from col. 3 ,line 64 to col. 4 ,line 6). From this , it would have been obvious to the skilled artisan in the art to have applied the low intensity agitation to the adipic crystals in the crystallizer for the purpose of displacing crystal fragments as well as smoothing the surface of the liquid crystals.

Anderson et al does teach the process of producing adipic acid crystals by means of the low or high ultrasonic agitation. In the process, there is a continuous re-circulation of slurry based on mother liquor containing dissolved adipic acid, nascent crystals of adipic acid, and crystals of adipic acid through the cylindrical baffle; furthermore, depending on the intended ultrasonic use, the low or high intensity agitation can be applied to the crystals. Therefore, it would have been obvious to the skilled artisan in the art to have motivated to adjust the low intensity agitation to the adipic crystals in the crystallizer for the purpose of displacing crystal fragments as well as smoothing the surface of the liquid crystals. This is because the skilled artisan in the art would expect the surface of the adipic crystals in the crystallizer to be smooth out by the low intensity agitation operation of the ultrasonic device as shown in the reference.

#### Response to Argument

Applicants argue the following issues:

1. the reference does not suggest stirring the liquid medium to smooth the surface of the liquid crystals ;
2. the reference does not suggest dispersing adipic acid crystals;

3. the reference does not suggest forming a mixture of solid and liquid and then setting that mixture to smooth the surface of the liquid crystals.

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the first, second, and third arguments, the Examiner has noted applicants' arguments. However, the Anderson et al does indicate that there is a continuous re-circulation of slurry based on mother liquor containing dissolved adipic acid, nascent crystals of adipic acid, and crystals of adipic acid through the cylindrical baffle (see col .2 ,lines 46-49). From this, there is a teaching of a mixture of solid and liquid. Furthermore, depending on the intended ultrasonic use, a low or high intensity agitation can be applied to the crystals (see from col. 3 ,line 64 to col. 4 ,line 6). Therefore, it would have been obvious to the skilled artisan in the art to have applied the low intensity agitation to the adipic crystals in the crystallizer for the purpose of displacing crystal fragments as well as smoothing the surface of the liquid crystals.

#### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Victor Oh whose telephone number is (703) 305-0809. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman can be reached on (703) 308-4698. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

*2m/for Vth*  
*5/31/03*

*Alan L. Rotman*  
ALAN L. ROTMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600